Participle Choice in Turkish Relative Clauses*

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トルコ語関係節は、動詞に「分詞」(Participle) が付与されるが、その分詞には「主語分詞 (Subject Participle) *-en*」と「目的語分詞 (Object Participle) *-dig*」があることが知られている。分詞の選択については Underhill (1972) が、関係節主要部が基底構造において主語の役割を担っている場合は主語分詞 *-en* が動詞に付与され、それが主語以外の役割を担っている場合は目的語分詞 *-dig* が動詞に付与されるという一般化を提案している。Underhill (1972) は、属格主語 (genitive subjects) や非定形主語 (indefinite subjects) が含まれる関係節についても議論を行い、一般化の妥当性を論じているが、Haig (1998) 等が指摘するように、Underhill の一般化は事実を正しく記述しているものの、理論的な説明力がない。

Poole (1993) は目的語分詞を伴う関係節は、動詞に所有格のマーカーが付与されるのに対して、主語分詞を伴う関係節はこのマーカーが付かない事実に着目し、目的語分詞を伴う関係節には AgrP が存在するという提案をし、Underhill の一般化の理論的説明を試みているが、Poole (1993) の分析は、定形主語 (definite subjects)・非定形主語 (indefinite subjects) の間に見られる分詞の違いを説明できないという問題点が残る。しかしながら Poole の分析はたいへん興味深く、本論文では Poole が提案した構造をもとに新たな分析を加え、Underhill の一般化を理論的に導き出すことを目的とする。

本論文ではまず、Diesing (1992) の Mapping Hypothesis を仮定した上で、強形限定詞 (strong determiners) を持つ名詞句、すなわち定形名詞句は TP 指定部に生起しなければならず、一方、弱形限定詞 (weak determiners) を持つ名詞句、すなわち非定形名詞句は VP 指定部にとどまることができると仮定する。更に Collins (1997) に基づき、T の EPP 素性は場所句 (locative phrases) によってチェックすることができると仮定する。また、Poole の洞察を活かし、主格 (nominative Case) は T によってチェックされ、属格

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(genitive Case) はAgrによってチェックされると仮定する。これらの仮定の下、「関係節において、動詞がTP内にとどまった場合は主語分詞が付与され、動詞がAgrPに上がり、AgrP内の主部と指定部の間で一致があった場合は、目的語分詞が付与される」と提案する。

このように、本論文では、Poole (1993) の構造を活かした上で、Pooleの構造に伴う問題点が生じることなく、トルコ語関係節の分詞選択を説明できることを示す。

1 Introduction

In this paper, I will consider the participle choice in Turkish relative clauses. There are two strategies for relativization: one is attaching the subject participle *–en* to the verb in relative clauses and the other is attaching the object participle *–dig* to the verb in relative clauses.[1)] Underhill (1972) and Hankamer and Knecht (1976) propose generalizations/principles for the choice of participles in relative clauses, and Poole (1993) tries to provide a theory that accounts for these generalizations/principles. However, Poole's analysis includes some theoretical and empirical problems. This paper aims to solve those problems.

This paper is organized as follows: Section 2 discusses Underhill's (1972) generalization, which describes the choice of participles in relative clauses. In this section, I will also show that a difference exists in participle choice between definite subjects and indefinite subjects in Turkish relative clauses. In Section 3, I will examine Poole's (1993) analysis and show some problems with the analysis. Section 4 deals with assumptions that I will use to solve problems with Poole's theory. In Section 5, I will show that an alterative analysis presented in this paper can account for the choice of participles in relative clauses correctly. A summary and a discussion of implications conclude this paper.

2 Choice of Participles in Relative Clauses

2. 1 Underhill's (1972) Generalization

Turkish relative clauses are participle constructions. Verbs in the relative clause carry a participle suffix. For example, the relative clause (1) is derived from (2).

(1)	mekteb-e	gid-en	oğlan	(2)	oğlan	mekteb-e	gid-er.
	school-DAT	go-PART	boy		boy	school-DAT	go-PRES
	'the boy who goes to school'				'The boy goes to school.'		(Underhill 1972: 87)

[1)] I owe these particle names to Underhill (1972) and Hankamer and Knecht (1976).

The suffix *–e* is replaced with *–en* in (1). Verbs in relative clauses in Turkish thus have different suffixes than verbs in declarative sentences. There are two types of participles used in Turkish relative clauses: one is 'the subject participle (SP) *–en*' and the other is 'the object participle (OP) *–dig*.' (3a, b) are relative clauses with the subject participle and (4a-c) are similar examples with the object participle.[2)]

(3) a. [e]$_i$ kabağ-ı yi-yen yılan$_i$
squash-ACC eat-SP snake
'the snake that ate the squash'

b. [e]$_i$ mekteb-e gid-en oğlan$_i$
school-DAT go-SP boy
'the boy who goes to school'

(4) a. yılan-ın [e]$_i$ ye-diğ-i kabak$_i$
snake-GEN eat-OP-POSS squash
'the squash that the snake ate'
(Hankamer and Knecht 1976: 197)

b. oğlan-ın [e]$_i$ git-tiğ-i mektep$_i$
boy-GEN go-OP-POSS school
'the school which the boy goes to'
(Underhill 1972: 87)

The choice of participles is not arbitrary. Underhill (1972) suggests the following generalization as to the choice of participles:

(5) Underhill's (1972) Generalization

> The most obvious generalization is that when the head noun is the subject of the underlying sentence, a construction of the *–En* type [=SP] appears, while if the head noun is not the subject, a construction of the *–Dig* type [=OP] appears.
>
> (Underhill 1972: 88)

Taking Underhill's Generalization into consideration, let us examine (3) and (4) again. In (3a, b), the subject is relativized. Hence the subject participle is attached to the verb. In (4a, b), the object undergoes relativization, and hence the object participle is attached to the verb. Considering these relative clauses, Underhill's Generalization seems to be on the right track.

However, as Underhill (1972) and Hankamer and Knecht (1976) show, relativization of genitive NPs does not obey this generalization. Let us consider genitive relativization.

(6) The man's snake ate the squash.

Adam-ın	yılan-ı	kabağ-ı	ye-di.
man-GEN	snake-POSS	squash-ACC	eat-PAST

2) Because of the vowel harmony, the subject participle *–en* is changed to *–yen* in (3a) and the object participle *–diğ* is changed to *–tiğ* in (4b).

(7) the man whose snake ate the squash

a.	[e]$_i$	yılan-ı	kabağ-ı	yi-yen	adam$_i$
		snake-POSS	squash-ACC	eat-SP	man
b.	* [e]$_i$	yılan-ın-ın	kabağ-ı	ye-diğ-i	adam$_i$
		snake-POSS-GEN	squash-ACC	eat-OP-POSS	man

(Hankamer and Knecht 1976: 199)

In the relative clauses (7), the possessor of the subject undergoes relativization. As (7a, b) show, the verb in the relative clause must carry the subject participle. Taking account of the fact that the relativized NP is not a subject itself but only a part of subject, it seems plausible to consider that the verb carries the object participle. Underhill's generalization stipulates that the object particle appears in a verb if the head noun is not a subject.

Next let us consider the case where the possessor of some noun other than the subject is relativized.

(8) The boy goes to the man's school.

oğlan	adam-ın	mekteb-in-e	gid-er.
boy	man-GEN	school-POSS-DAT	go-PRES

(9) the man whose school the boy goes to

a.	oğlan-ın	[e]$_i$	mekteb-in-e	git-tiğ-i	adam$_i$
	boy-GEN		school-POSS-DAT	go-OP-POSS	man
b.	* oğlan	[e]$_i$	mekteb-in-e	gid-en	adam$_i$
	boy		school-POSS-DAT	go-SP	man

(Underhill 1972: 89-90)

(10) the man whose daughter I love

[e]$_i$	kız-ı-nı	sev-diğ-im	adam$_i$
	girl-POSS-ACC	love-OP-POSS	man

(Barker, Hankamer and Moore 1990)

In (8), the possessor occurs in an oblique NP and only the possessor undergoes relativization in (9). In (10), the relativized NP is originally generated in the object NP. In both cases, the verb must carry the object participle. The participle of the verb is thus dependent on the

position where the head NP is originally generated. Based on these facts, Underhill (1972) suggests that Underhill's generalization should be extended to genitive head nouns. If the genitive head noun is in the subject in the underlying structure, the subject participle is used. On the other hand, if it is in the object in the underlying structure, the object participle is used.

2. 2 Indefinite Subjects vs. Definite Subjects

Underhill (1972) furthermore argues that Indefinite Movement and the choice of participles are deeply related to each other. Consider the following:

(11) a. üst-ün-de šarap dur-**an** masa b. alt-ın-dan su ak-**an** kapı
top-POSS-LOC wine stand-**SP** table bottom-POSS-ABL water flow-**SP** door
'the table that wine is standing on' 'the door that water is flowing out from under'

(12) a. üst-ün-de šarab-ın dur-**duğ**-u masa
top-POSS-LOC wine-GEN stand-**OP**-POSS table
'the table that the wine is standing on'

b. alt-ın-dan suy-un ak-**tığ**-ı kapı
bottom-POSS-ABL water-GEN flow-**OP**-POSS door
'the door that the water is flowing out from under' (Underhill 1972: 90-91)

Interestingly, Turkish relative clauses have an asymmetry between definites and indefinites as to the choice of participles. As (11a, b) show, when the subject of the relative clause is either indefinite or must be interpreted as indefinite, the subject particle appears on the verb. However, when the subject of relative clause is definite, the verb must carry the object participle, as represented in (12a, b). Since there is no difference in relative head NPs between (11a, b) and (12a, b), Underhill's generalization, which stipulates that the extracted element from a relative clause determines the particle attached to a verb, cannot capture this fact.

Underhill (1972) argues that the difference in particles attached onto a verb is closely related to *Indefinite Noun Phrase Movement.* In Turkish, an indefinite subject must move from the sentence-initial position to the position immediately to the left of the verb in normal sentences, while definite subjects can stay in the sentence-initial position.

(13) a. **su** kapı-nın alt-ın-dan ak-ıyor
water door-GEN bottom-POSS-ABL flow-PROG
'The water is flowing out from under the door.'

b. kapı-nın alt-ın-dan **su** ak-ıyor
door-GEN bottom-POSS-ABL water flow-PROG
'Water is flowing out from under the door.'

(14) a. **lamba** adam-ın oda-sın-da yan-ıyor
light man-GEN room-POSS-LOC burn-PROG
'The light is burning in the man's room.'

b. adam-ın oda-sın-da **bir lamba** yan-ıyor
man-GEN room-POSS-loc a light burn-PROG
'A light is burning in the man's room.'

(*op. cit.*, p. 91)

In (13a), *su* 'water' is interpreted as definite, because it occurs in the sentence-initial position. In (13b), however, *su* 'water' is interpreted as indefinite. Taking this into account, indefinite subjects, or subjects interpreted as indefinite must occur in the position immediately preceding the verb. (14) indicates this fact more clearly. In (14a), *lamba* 'light' is interpreted as definite, because it stays in the sentence-initial position. On the other hand, the indefinite subject *bir lamba* 'a light' occurs in (14b). This indefinite subject must undergo movement to the position immediately to the left of the verb *yan-ıyor* 'burn-PROG.' If it stays in the sentence-initial position, the sentence would be deemed ungrammatical. Underhill (1972) calls this shift of NPs as *Indefinite Noun Phrase Movement.*

Indefinite Noun Phrase Movement is also applied to objects. Let us now focus on the direct object position. Consider (15).

(15) a. adam **taš-ı** oğlan-a at-tı.
man stone-ACC boy-DAT throw-PAST
'The man threw the stone at the boy.'

b. adam oğlan-a **taš** at-tı
man boy-DAT stone throw-PAST
'The man threw a stone/stones at the boy.'

(*op. cit.*, p. 92)

As represented in (15a), the direct object *taš* 'stone' occurs in the position before the indirect object and this direct object has a definite interpretation. In (15b), on the other hand, *taš* must move to the position immediately to the left of the verb *at-tı* 'throw-PAST.' Thus indefinite direct objects also need to undergo Indefinite Noun Phrase Movement. If the subject is indefinite and the direct object is definite, the subject must move immediately to the left of the verb, as indicated in (16). If both the subject and the direct object are indefinite, both undergo movement and the direct object must occur closer to the verb, as shown in (17).

(16) taš-ı oğlan-a **bir adam** at-tı.
stone-ACC boy-DAT a man throw-PAST
'A man threw the stone at the boy.'

(17) oğlan-a **bir adam taš** at-tı.
boy-DAT a man stone throw-PAST
'A man threw a stone at the boy.'

(*op. cit.*, p. 92)

Indefinite Noun Phrase Movement is thus obligatory in Turkish. Underhill (1972) argues that Indefinite Noun Phrase Movement must take place before relativization. When a head noun which is not a subject occurs in the sentence-initial position because of Indefinite Noun Phrase Movement of the subject in the underlying structure, the subject participle is attached to the verb in its relative clause counterpart. Consider (11a, b) again. In (11a, b), the locative adverbial phrase occurs in the sentence-initial position at the point of relativization, because the indefinite subject undergoes movement to the position immediately to the left of the verb. The genitive head noun undergoes relativization from this sentence-initial locative phrase. Since the position in which the head noun is generated is the sentence-initial position, the subject participle is attached to the verb in the relative clause.

Let us next consider (12a, b), which have definite subjects. The subjects in (12a, b) also occur in the position immediately to the left of the verb. However, Underhill (1972) suggests that this dislocation is the result of scrambling, not of Indefinite Noun Phrase Movement. Though the locative adverbial phrase in which the head noun originally occurs appears in the sentence-initial position, the verb in the relative clause must carry the object participle. From this, Underhill (1972) proposes that relativization must take place after Indefinite Noun Phrase Movement, but it must occur before scrambling. Taking this into consideration, the definite object in (12a, b) occurs in the sentence-initial position at the point of relativization. Since the head noun neither belongs to the subject nor occurs in the sentence-initial position, the object participle is correctly predicted to appear on the verb. Thus Underhill's

proposal can explain the choice of participles in relative clauses.

Underhill's proposal is summarized as follows:

(18) Underhill's Proposal

a. Underhill's (1972) Generalization

The most obvious generalization is that when the head noun is the subject of the underlying sentence, a construction of the *–En* type [=SP] appears, while if the head noun is not the subject, a construction of the *–Dig* type [=OP] appears.

b. Indefinite Noun Phrase Movement precedes relativization.

c. Scrambling takes place after relativization.

d. In relativization, if a genitive head noun occurs in the sentence-initial position, the subject participle is attached to the verb in the relative clause. Otherwise, the object participle is attached to the verb in the relative clause.

3 Theory: Poole (1993)

3. 1 Agreement in Relative Clauses with the Object Participle

As we have discussed in previous chapters, Underhill's (1972) generalization can capture the choice of participles correctly. However, as Haig (1998) points out, while the generalization provides an effective description, it lacks explanatory value from a theoretical point of view.

Poole (1993) tries to provide a theory that accounts for the generalization and principle. He directs his attention to the fact that agreement takes place in relative clauses with the object participle. Let us examine (4a, b) again, repeated here as (19a, b).

(19) a. yılan-ın [e]$_i$ ye-diğ-i kabaki
snake-GEN eat-OP-POSS squash
'the squash that the snake ate' (Hankamer and Knecht 1976: 197)

b. oğlan-ın [e]$_i$ git-tiğ-i mektep$_i$
boy-GEN go-OP-POSS school
'the school which the boy goes to' (Underhill 1972: 87)

In (19a, b), the verb carries not only the object participle but also the possessive marker. It is plausible to assume that the verb agrees with the genitive subject, and hence that the

possessive marker is attached to the verb as a result of this agreement. The difference between indefinite subjects and definite subjects which we have seen in 2.2 lends clearer evidence to this claim. Consider (11a) and (12a), repeated here as (20a, b).

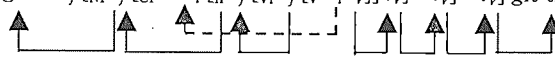
(20) a. üst-ün-de **šarap** dur-an masa
top-POSS-LOC wine stand-SP table
'the table that wine is standing on'

b. üst-ün-de **šarab-ın** dur-duğ-**u** masa
top-POSS-LOC wine-GEN stand-OP-POSS table
'the table that the wine is standing on' (Underhill 1972: 90-91)

As discussed in 2.2, the subject participle is attached to a verb when the subject in a relative clause is indefinite. On the other hand, when the subject in a relative clause is definite, the object participle is used. When the subject participle appears, the indefinite subject does not carry genitive Case, as shown in (20a). However, when the object participle occurs, the subject has genitive Case and the possessive marker is attached to the verb, as represented in (20b). Thus when the object participle appears in a verb, an agreement relationship can be taken to hold between the subject and the verb.

Based on this agreement fact, Poole (1993) proposes that an agreement phrase exists between the relative clause CP and the head noun. In addition, he argues that there is an NP, where a participle is generated, on top of the relative clause CP. Let us examine the structure of (19b), a relative clause with the object participle, in Poole's (1993) theory.

(21) $[_{NP}\ [_{AgrP}$ Oglan-ın$_j$ $[_{NP}\ t_j\ [_{CP}$ OP$_i$ $[_{IP}\ t_j\ [_{VP}\ t_j\ [_{V'}\ e_i\ t_V]]]\ t_V]\ \ t_V]\ \ t_V]$ git-tiğ-i$_V]$ $[_{NP}$ mektep$_i]]$



In (21), the null operator moves from its original position to Spec-CP, instituting an operator-variable relation. The subject, which originally occurs in Spec-VP, first moves to Spec-IP, then moves to Spec-NP and finally lands in Spec-AgrP. The verb undergoes cyclic head movement resulting in its location in the head of AgrP. The subject and the verb enter into a Spec-head agreement relation also in AgrP.

The cyclic movement of the subject skips Spec-CP, because the null operator occupies here. It could be considered that the null operator in Spec-CP blocks this movement.

However, Poole (1993) argues that the subject position is properly governed at S-structure in Turkish, and hence overt long distance movement from Spec-IP to Spec-NP does not provide any problem. He provides (22) as the evidence for the validity of this type of overt long distance movement in Turkish.

(22) [$_{IP}$ Berna-nın$_i$ [$_{IP}$ ben [$_{CP}$ [$_{IP}$ t_i kitap oku-duğ-un-u]] bil-iyorum]]
Berna-GEN I book read-PART-OP-ACC know-PROG
'I know that Berna is reading a book.' (Poole 1993: 143)

In (22), the genitive subject, which is in Spec-IP in the most deeply embedded clause, undergoes movement to the sentence-initial position. The movement skips the Spec-CP position, but the trace of the genitive subject NP is properly governed. Based on this data, Poole (1993) argues that the movement from Spec-IP to Spec-NP in (21) is allowed.

Next, let us examine the structure of relative clauses with the subject participle. Consider (23) and its structure (24).

(23) mekteb-e gid-en oğlan 'the boy who goes to school'
school-DAT go-SP boy

(24) [$_{NP}$ [$_{NP}$ Spec [$_{CP}$ OP_i [$_{IP}$ t_i [$_{VP}$ t_i [$_{V'}$ mekteb-e t_V]] t_V] t_V] t_V] gid-en$_V$] [$_{NP}$ oğlan$_i$]]

In (24), the subject originally occurs in Spec-VP and then moves to Spec-IP. It then moves to Spec-CP and enters into the operator-variable relation. The verb undergoes cyclic head movement and finally stays in the head of NP. No agreement with the verb is needed in relative clauses, and hence AgrP does not appear in (24). Thus Poole (1993) captures the difference between relative clauses with the subject participle and ones with the object participle in terms of the presence or absence of AgrP.

3. 2 Problems with Poole (1993)

Poole's (1993) structure raises some empirical problems. It turns out that his structure cannot capture the difference in participle choice between definite subjects and indefinite subjects in relative clauses. As we have seen in 2.2, the subject participle is attached to a verb, when an indefinite subject occurs in the subject position in a relative clause. On the other hand, the object participle is used, when a definite subject occurs there. In Poole's

mechanism, both cases are handled using the same structure. Let us examine (11a) and (12a) by using Poole's structure for relative clauses with a subject participle.

(11) a. üst-ün-de šarap dur-**an** masa 'the table that wine is standing on'
top-POSS-LOC wine stand-SP table

(25) a. $[_{NP}\ [_{NP}\ [_{LocP}$ üst-ün-de$]_k$ $[_{CP}\ OP_j$ $[_{IP}$ šarap$_i$ $[_{VP}\ t_i$ $[_{V'}\ [_{LocP}\ t_j\ t_k]\ t_V]]\ t_V]\ t_V]$ dur-an$_V]$ $[_{NP}$ masa$_j]]$

b. $[_{NP}\ [_{NP}\ [_{LocP}$ üst-ün-de$]_k$ $[_{CP}\ OP_j$ $[_{IP}\ t_i$ $[_{VP}$ šarap$_i$ $[_{V'}\ [_{LocP}\ t_j\ t_k]\ t_V]]\ t_V]\ t_V]$ dur-an$_V]$ $[_{NP}$ masa$_j]]$

(12) a. üst-ün-de šarab-ın dur-**duğ**-u masa 'the table that the wine is standing on'
top-POSS-LOC wine-GEN stand-OP-POSS table

(26) $[_{NP}\ [_{NP}\ [_{LocP}$ üst-ün-de$]_k$ $[_{CP}\ OP_j$ $[_{IP}$ šarab$_i$ $[_{VP}\ t_i$ $[_{V'}\ [_{LocP}\ t_j\ \ t_k]\ t_V]]\ t_V]\ t_V]$ dur-an$_V]$ $[_{NP}$ masa$_j]]$

The indefinite subject *šarap* 'wine' occurs in (25a, b), which are the structures of (11a) according to Poole's (1993) structure of relative clauses with the subject participle. The indefinite subject stays in Spec-TP in (25a), whereas it undergoes downward movement to Spec-VP in (25b), which is based on Underhill's (1972) Indefinite Noun Phrase Movement. The definite subject *šarab* 'the wine' occurs in (26), which is the structure of (12a) on the basis of the same theory. We do not have any way to differentiate these sentences. The null operator occurs in the same place and undergoes movement to Spec-CP in the same way. On this theory, there is no reason why (12a) cannot have the structure of (26). Likewise, we can assume the structure of relative clauses with the object participle for both (11a) and (12a). We cannot explain why (11a) cannot have the structure of the relative clause with the object participle.[3)]

(11) a. üst-ün-de šarap dur-**an** masa

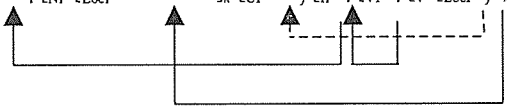
(27) $[_{NP}\ [_{AgrP}$ šarap$_j$ $[_{NP}\ [_{LocP}$ üst-ün-de$]_k$ $[_{CP}\ OP_j$ $[_{IP}\ t_i$ $[_{VP}\ t_i$ $[_{V'}\ [_{LocP}\ t_j\ t_k]\ t_V]]\ t_V]\ t_V]$ dur-duğ$_V]$
$[_{NP}$ masa$_j]]$

3) Considering word order, the locative phrase might undergo scrambling after relativization. However, for expository purposes, I assume that the locative phrase is scrambled to Spec-NP under AgrP.

(12) a. üst-ün-de šarab-ın dur-**duğ**-u masa

(28) [$_{NP}$ [$_{AgrP}$ šarab-ın$_i$ [$_{NP}$ [$_{LocP}$ üst-ün-de]$_k$ [$_{CP}$ OP_j [$_{IP}$ t_i [$_{VP}$ t_i [$_{V'}$ [$_{LocP}$ t_j t_k] t_V]] t_V] t_V] t_V] dur-duğ$_V$]

[$_{NP}$ masa$_j$]]



Thus Poole's (1993) analysis cannot differentiate between relative clauses containing definite subjects and ones containing indefinite subjects.

4 Alternative Analysis: Assumptions

Poole's (1993) mechanism based on agreement is quite intriguing and provides the logical possibility that the choice of participles in relative clauses can be explained theoretically. In this section, I try to revise Poole's theory, solving the problems with his analysis discussed in section 3.2.

4. 1 Definites/Indefinites (Diesing 1992)

Diesing (1992) proposes the Mapping Hypothesis and explains the difference in LF structure between the existential reading and the generic reading. The Mapping Hypothesis is defined as follows:

(29) Mapping Hypothesis

- Material from VP is mapped into the nuclear scope.
- Material from IP (TP) is mapped into a restrictive clause. (Diesing 1992: 15)

Diesing (1992) argues that the nuclear scope provides the generic reading and the restrictive clause provides the existential reading. To be concrete, when the subject occurring in Spec-TP undergoes LF lowering to Spec-VP, the existential reading is obtained. Diesing (1992) extends this analysis to the difference between strong determiners and weak determiners, which was originally introduced by Milserk (1974). Weak determiners can appear with a subject NP in *there*-insertion contexts, whereas strong determiners cannot.[4)]

(30) a. There is/are a/some/a few/many/three fly (flies) in my soup.

b. * There is/are the/every/all/most fly (flies) in my soup. (*op. cit.*, p. 59)

Diesing (1992) claims that this difference is rooted in presuppositionality. She argues the following as to presupposition.

(31) Strong determiners presuppose the existence of the entities they are applied to. Weak determiners are ambiguous between a presuppositional reading and a nonpresupositional reading in which they merely assert the existence of whatever entities they are applied to. (*op. cit.*, p. 59)

Following Diesing's (1992) idea on presuppositionality, it is considered that NPs with a strong determiner occurs in the restrictive clause, which provides the generic reading, because the generic reading is presuppositional. On the basis of this idea, it is possible to argue that NPs with a strong determiner must occur in Spec-TP, where the generic reading is derived. On the other hand, NPs with a weak determiner can stay in Spec-VP, where the existential reading is provided, and need not raise to Spec-TP.[5] In the following sections, I will show that this hypothesis can also account for the choice of participles in relative clauses.

To summarize, I propose (32) on the basis of Diesing's analysis of strong and weak determiners.

(32) • NPs with a strong determiner must occur in Spec-TP. (= definite NP)
• NPs with a weak determiner can stay in Spec-VP. (= indefinite NP)

4. 2 Proper Binding Condition and the EPP-feature of T

As we have seen in 2.2, indefinite NPs must occur in the position immediately to the

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[4] The same linguistic phenomena are shown in Turkish. Weak determiners can appear with a subject NP in *there*-constructions. However, strong determiners cannot occur in *there*-constructions.

(i) a. Bahçe-de köpek var. Girmiyelim.
'There is/are a dog/dogs in the garden. Let's not go in.'
b. Bahçede köpek yok. Korkma.
'There is/are no dog/dogs in the garden. Don't be afraid.'

(ii) a. Köpek bahçede. Şimdi gördüm.
'The dog is in the garden. I just saw it.'
b. Köpek bahçede değil, arabada.
'The dog is not in the garden, (it is) in the car.' (Tura 1986: 172)

[5] If the subject stays in Spec-VP in relative clauses with the object participle, the EPP-feature of T is not checked. In 4.2, I will argue that the EPP-feature of T is checked by a locative phrase.

left of a verb in Turkish. Underhill (1972) argues that indefinite subjects move to that position by Indefinite Noun Movement before relativization. For example, in (13b), repeated here as (33), the locative phrase occurs in sentence-initial position, because of Indefinite Noun Movement, which moves indefinite NPs in sentence-initial position to the position immediately to the left of verbs. Since the element occurring in the leftmost position is relativized, the subject participle is attached to a verb as shown in (34).

(33) kapı-nın alt-ın-dan **su** ak-ıyor
door-GEN bottom-POSS-ABL water flow-PROG
'Water is flowing out from under the door.'

(34) alt-ın-dan su ak-**an** kapı
bottom-POSS-ABL water flow-**SP** door
'the door that water is flowing out from under' (Underhill 1972: 90-91)

However, I claim that this derivation raises a theoretical problem. Let us examine the derivation stage before relativization in (33). Since the subject *su* 'water' is indefinite, it moves to a position lower than its original position, according to Underhill's (1972) mechanism. However, I argue that this downward movement is problematic from the viewpoint of the Proper Binding Condition (Fiengo 1977, Lasnik and Saito 1992, etc.).

(35) t_i kapı-nın alt-ın-dan su_i ak-ıyor

In (35), where *kapı-nın* 'door' in (33) is relativized. It is the head noun in the element which occurred in the leftmost position before relativization, so the subject participle is attached to the verb, according to Underhill's (1972) generalization. If this downward movement is applied to the indefinite subject, the trace of this indefinite subject is not properly governed, because the antecedent is located in a lower clause. Consequently, this movement results in a violation of the Proper Binding Condition. In view of the Proper Binding Condition, I claim that this downward movement does not take place in sentences including indefinite subjects.

Let us therefore consider an alternative analysis for Indefinite Noun Phrase Movement. In (32), I have suggested on the basis of Diesing's (1992) analysis that indefinite NPs can stay in Spec-VP. Let us apply this idea to (33). Now the indefinite subject *su*

'water' stays in Spec-VP during the derivation. However if this NP remains here, it seems that the EPP-feature of T is not checked. Since Chomsky (1982), it has been argued that the EPP-feature of T must be checked by an overt element. However, I claim that the indefinite NP stays in Spec-VP. Then, following Collins (1997), let us assume that the EPP-feature of T is checked by a locative phrase. Collins shows that locative phrases can check the EPP-feature of T with the following data:

(36) Down the hill rolled John. (Collins 1997: 27)
(37) Under the bed is a good place to hide.

Utilizing Collins' insight, let us assume that the locative phrase checks the EPP-feature of T in (33). (33) then has the following derivation step at one point during its derivation.

(38) $[_{TP}\ [_{LocP}$ kapı-nın alt-ın-dan$]_i\ [_{VP}$ su $[_{V'}\ [_{LocP}\ t_i]\ t_V]]$ ak-ıyor$]$

I thus assume that indefinite subjects stay in Spec-VP and this is guaranteed from the Proper Binding Condition. In addition, following Chomsky (1982), I hypothesize that the EPP-feature of T must be checked by an overt element and locative phrases can check this feature.

5. Analysis

Let us examine the relative clauses presented in this paper again in light of the assumptions presented in the previous section. First, let us consider (3a, b).

(3) a.	$[e]_i$	kabağ-ı	yi-yen	yılan$_i$	'the snake that ate the squash'
		squash-ACC	eat-SP	snake	
b.	$[e]_i$	mekteb-e	gid-en	oğlan$_i$	'the boy who goes to school'
		school-DAT	go-SP	boy	

(39) a. $[_{NP}\ [_{CP}\ OP_i\ [_{TP}\ t_i\ [_{VP}\ t_i\ [_{V'}$ kabağ-ı $t_V]$ yi-yen$_V]]]$ yılan$_i]$

b. $[_{NP}\ [_{CP}\ OP_i\ [_{TP}\ t_i\ [_{VP}\ t_i\ [_{V'}$ mekteb-e $t_V]$ gid-en$_V]]]$ oğlan$_i]$

(39a) is the structure of (3a). The null operator corresponding to the relative head noun *yılan* 'snake' originally occurs in Spec-VP. It moves to Spec-TP to check the EPP-feature of T. Then it undergoes movement to Spec-CP. As for the verb, it originally occurs in the head of VP and then undergoes head movement to the head of TP. The relative head *yılan* merges with the relative clause CP. I assume that the accusative Case and the nominative Case are checked by Chomsky's (2000) AGREE system. Let us hypothesize that the accusative Case of *kabağ-ı* is checked by the V head and the nominative Case of *yılan* is checked by the T head when the subject is in Spec-VP. There are no NPs whose Case needs to be checked, and hence AgrP does not appear on top of the relative clause CP. Then I suggest the following principle for the choice of participles in relative clauses:

(40) When a verb stays in TP, the subject participle is attached to the verb in the relative clause. When a verb raises to AgrP and there is a Spec-head agreement in AgrP, the object participle is attached to the verb in the relative clause.

Contra Poole (1993), I do not assume the NP phrase to be the place where the participle appears. In my analysis, participles are attached to a verb in the position where it appears. The subject participle is the default in my view. If Spec-head agreement takes place between the subject and the verb, the verb appears with the object participle.[6] Keeping this in mind, let us examine (39b). The verb stays in T, because there are no elements in the relative clause which need to be in an agreement relation in AgrP. Therefore the subject partciple is attached to the verb. Thus the analysis presented here can account for the choice of the subject participle in (39a). (39b) is explained in the same way. The relative head is the nominative Case, and hence it does not need to be checked in AgrP. Since AgrP is not formed and the verb stays in T, the subject participle is attached to the verb.

Next, let us consider (4a, b), which are relative clauses with the object participle.

(4) a.	yılan-ın	[e]$_i$	ye-diğ-ı	kabak$_i$	'the squash that the snake ate'
	snake-GEN		eat-OP-POSS	squash	
b.	oğlan-ın	[e]$_i$	git-tiğ-i	mektep$_i$	'the school which the boy goes to'
	boy-GEN		go-OP-POSS	school	

[6] This illustrates the fact that the possessive marker is attached to the verb when the object participle appears on the verb. The presence of the possessive marker is due to the agreement between the subject and the verb.

(41) a. $[_{NP}\ [_{AgrP}$ yılan-ın$_i$ $[_{CP}\ OP_j\ [_{TP}\ t_i\ [_{VP}\ t_i\ [_{V'}\ t_j\ t_V]]]\ t_V]\ t_V]$ ye-diğ-i$_V$] kabak$_j$]

b. $[_{NP}\ [_{AgrP}$ oğlan-ın$_i$ $[_{CP}\ OP_j\ [_{TP}\ t_i\ [_{VP}\ t_i\ [_{V'}\ t_j\ t_V]]]\ t_V]\ t_V]$ git-tiğ-i$_V$] mektep$_j$]

(41a) is the structure of (4a). The null operator of the relative head noun occurs in the VP-complement position and it moves to Spec-CP. The subject is originally generated in Spec-VP. This subject has the genitive Case. Here, I need to mention the reason why this subject has not the nominative Case but the genitive Case.[7] Data regarding Turkish relative clauses show that subjects followed by a gap of the relativized element always have the genitive Case. Consider the following:

(42) a. [adam-ın [e]$_i$ al-dığ-ı] araba$_i$ 'the car which the man bought'
man-GEN buy-OP-POSS car (Kornfilt 1977: 417)

b. [çocuğ-un [e]$_i$ getir-eceğ-i-ni san-dığ-ım] kitap$_i$
child-GEN bring-COMP-POSS-ACC believe-OP-POSS book
'the book that I thought the child would bring' (Barker, Hankamer and Moore 1990)

c. [arı-nın [e]$_i$ bacağ-ın-ı sok-tuğ-u] kız$_i$
bee-GEN leg-POSS-ACC sting-OP-POSS girl
'the girl whose leg the bee stung' (*op. cit.*)

(42a-c) imply that a nominative subject changes to a genitive subject when a gap follows it. Underhill (1976: 288) makes mention of the occurrence of the genitive Case in subjects:

(43) A verb in Turkish must indicate the person of the subject. In the case of a subject participle, it is clear that the subject must be the noun that the participle modifies. In the case of an object participle, however, the subject of the verb is somewhere in the relative clause or may not be expressed at all (if it is a pronoun). Therefore, the possessive personal ending and the corresponding genitive must be attached. (Underhill 1976: 288)

This shows that a nominative subject changes to a dative subject when it remains in a

[7] The reviewers pointed out to me the necessity of explanation for the difference of Case of subjects between the genitive Case and the nominative Case. I would like to thank the reviewers for reminding me of this issue.

relative clause, namely when it does not undergo relativization. However, (11a, b), where an indefinite subject occurs in the relative clause, show that a nominative subject can occur in the relative clause. Taking (42a-c) and (11a, b) into consideration, let us assume that the subject followed by a gap in the relative clause has the genitive Case. The subject in (4a, b) is followed by a gap, and hence, it seems plausible to argue that the genitive suffix *-ın* is attached to the subject *yılan* in (4a) and *oğlan* in (4b).

Taking this into consideration, let us return (41a). Based on (40), T can check the nominative Case but cannot check the genitive Case. Hence, the genitive Case of the subject is not checked in Spec-VP by T. Let us then assume that this genitive subject undergoes movement to Spec-TP to check the EPP-feature of T. The genitive Case of the subject has not been checked in T either, and hence it must undergo movement to the Spec of AgrP. The verb moves to the C head and finally lands in the head of AgrP.[8] The subject in Spec-AgrP agrees with the verb in the head of AgrP, and due to this agreement, the genitive Case of the subject is checked. Then, based on (40), the object participle is attached to a verb. Exactly the same derivation takes place in (41b). Thus the structure and the derivation presented here can account for the attachment of the object participle to the verb in the relative clause correctly.

Next, let us consider (11a), where an indefinite subject occurs in the subject in the relative clause.

(11) a. üst-ün-de šarap dur-an masa 'the table that wine is standing on'
top-POSS-LOC wine stand-SP table

(44) $[_{NP}\ [_{CP}\ OP_i\ [_{TP}\ \boxed{[_{LocP}\ (t_i)\ \text{üst-ün-de}]}\ [_{VP}\ \text{šarap}\ [_{V'}\ \boxed{[_{LocP}\ OP_i\ \text{üst-ün-de}]}\ t_V]]\ \text{dur-an}_V]]\ \text{masa}_i]$

In (44), the indefinite subject *šarap* 'wine' originally occurs in Spec-VP. Based on (32), let us assume that the indefinite subject stays in Spec-VP. Since this indefinite subject cannot check the EPP-feature of T, the locative phrase checks the EPP-feature of T.[9] Next, the null

[8] The verb cannot move to Agr directly as it would skip the C head. The head movement constraint (Travis 1984) bans head movement that involves skipping intervening heads. The head movement constraint is defined as follows:

(i) Head movement of X to Y cannot "skip" an intervening head Z.

[9] Poole (1993) also mentions the possibility of the checking of EPP-feature of T by a locative phrase. However, Poole does not provide any reason why AgrP cannot appear in (11a). In the analysis presented in this paper, the incompatibility with AgrP is due to the violation of the proper binding condition, as represented in (45).

operator corresponding to the NP *masa* 'table' moves from this locative phrase to Spec-CP.[10] Since there are no elements whose Case needs to be checked, AgrP does not appear in this structure. Finally, the relative head noun *masa* merges with CP. Since the verb stays in T, the default subject participle is attached to the verb. Thus the attachment of the subject participle can be explained correctly.

Even if AgrP, which hosts the object participle, occurs here, the locative phrase cannot move to the Spec of AgrP. Let us consider this alternative derivation.

(45) $[_{NP}\ [_{AgrP}\ [_{LocP}\ t_i$ üst-ün-de] $[_{CP}\ OP_i\ [_{TP}$ $[_{LocP}\ t_i$ üst-ün-de] $[_{VP}$ šarap $[_{V'}$ $[_{LocP}\ t_i$ üst-ün-de] $t_V]]$

$t_V]\ t_V]$ dur-duğ-$u_V]$ masa$_i]$

The locative phrase occurring in Spec of AgrP contains the trace of the operator of the relative head noun. This trace is not bound by the null operator in Spec-CP, because the null operator occurs in structurally lower position. The presence of the trace thus results in a violation of the Proper Binding Condition, and hence this derivation is not allowed. The incompatibility with AgrP has now been explained in terms of the Proper Binding Condition.

Next, let us consider (12a), where a definite genitive subject occurs in the relative clause.

(12) a. üst-ün-de šarab-ın dur-duğ-u masa 'the table that the wine is standing on'
top-POSS-LOC wine-GEN stand-OP-POSS table

(46) $[_{NP}\ [_{AgrP}$ šarab-ın$_j$ $[_{CP}\ OP_i\ [_{TP}\ t_j\ [_{VP}\ t_j\ [_{V'}\ [_{LocP}\ t_i$ üst-ün-de] $t_V]]\ t_V]\ t_V]$ dur-duğ-$u_V]$ masa$_i]$

The definite subject NP *šarab-ın* 'the wine' originally occurs in Spec-VP. Given (32), the definite NP must move to Spec-TP. The null operator corresponding to *masa* 'table' moves from LocP to Spec-CP. The genitive Case of the subject NP is not checked in Spec-TP, because T does not have genitive Case. Therefore, the subject NP is raised to Spec-AgrP and its genitive Case is checked by agreement with the verb raised to the head of AgrP. Since the verb stays in AgrP, the object participle is attached to the verb on the basis of (40). The

[10] This movement might be considered to violate the freezing principle. I leave a full explanation of this for future research.

genitive Case of the subject thus requires the presence of AgrP. If the subject stays in Spec-TP, the genitive Case of the subject remains unchecked. The result is ungrammaticality. Thus the occurrence of the object participle can also be explained correctly by my amendment of Poole's (1993) analysis.

6 Concluding Remarks

In this paper, I have examined choice of participles in Turkish relative clauses. Underhill (1972) suggested the generalization that the subject participle is attached to verbs in those relative clauses whose head noun is relativized from a subject position, whereas the object participle is attached to the verb in the relative clauses whose head noun is relativized from a non-subject position. Underhill (1972) also argued that indefinite nouns must undergo movement to the position immediately to the left of the verb and that the relativization of the leftmost element, which is not a subject, results in the subject participle. Underhill's generalizations are quite convincing, but lack theoretical force. Poole (1993) therefore provided a theory in order to account for them, but his structure yielded some problems. I have suggested that applying Diesing's (1992) Mapping Hypothesis and Collins' (1997) analysis of checking of the EPP-feature of T to an amended version of Poole's (1993) structures can solve the problem with Poole's analysis and give a clear explanation of participle choice of relative clauses in Turkish.

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